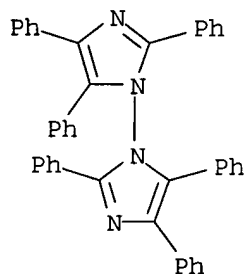


L10 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:755452 CAPLUS  
 DN 138:205367  
 TI Hexaarylbisimidazoles and ketocyanine dyes as effective electron transfer photoinitiating systems  
 AU Bendyk, Malgorzata; Jedrzejewska, Beata; Paczkowski, Jerzy; Linden, Lars-Ake  
 CS Fac. of Chem. Technol. and Eng., Univ. of Technol. and Agriculture, Bydgoszcz, 85-326, Pol.  
 SO Polimery (Warsaw, Poland) (2002), 47(9), 654-656  
 CODEN: POLIA4; ISSN: 0032-2725  
 PB Instytut Chemii Przemyslowej  
 DT Journal  
 LA English  
 AB Four different hexaarylbisimidazoles (HABIs) and 5 ketocyanine dyes (JAWs) have been synthesized. Chemical structures and basic spectroscopic properties of JAWs obtained have been characterized. Free energy changes ( $\Delta G_{el}$ ) of the process of electron transfer between HABIs and JAWs tested have been exptl. determined for 20 pairs of HABI + JAW. The dependence of the rate of 1,1,1-tri(acryloxymethyl)propane photopolymer., initiated with HABI + JAW systems in the presence of mercaptobenzoxazole, on the  $\Delta G_{el}$  value and on the radiation wavelength (488 nm and 355 nm or 365 nm) has been determined. It was found that chemical structures of HABI and JAW do not affect considerably the rate of polymerization  
 IT 811-32-5  
 RL: CAT (Catalyst use); USES (Uses)  
 (hexaarylbisimidazoles and ketocyanine dyes as effective electron transfer in photoinitiating systems)  
 RN 811-32-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

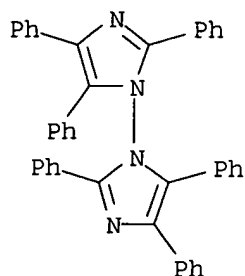
L10 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2002:748353 CAPLUS  
 DN 137:286428  
 TI Photopolymerization type lithography printing plate.  
 IN Shibuya, Akinori; Kunita, Kazuto  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 73 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002287344	A2	20021003	JP 2001-90184	20010327

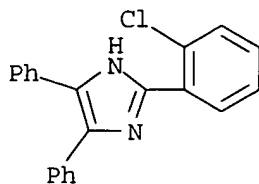
PRAI JP 2001-90184 20010327  
 AB The photosensitive layer of the disclosed pre-sensitized plate contains aliphatic and aromatic polymerizable compds, and a **photoinitiator** which have  $\geq 4$  aromatic rings. The pre-sensitized plate has good sensitivity and storage stability.  
 IT **811-32-5**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoinitiators for photopolymn. type pre-sensitized plates)  
 RN 811-32-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1999:440066 CAPLUS  
 DN 131:80774  
 TI Photoimaging composition containing photopolymerizable urethane oligomer  
 IN Barr, Robert; Lundy, Daniel E.; Kosaka, Eiji; Murakami, Shigeru  
 PA Nichigo Morton Co., Ltd., Japan  
 SO Eur. Pat. Appl., 7 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 927911	A2	19990707	EP 1998-309563	19981123
	EP 927911	A3	20000531		
	EP 927911	B1	20050302		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 5939238	A	19990817	US 1998-88561	19980602
	AU 707217	B1	19990708	AU 1998-89530	19981027
	CA 2252240	C	20020226	CA 1998-2252240	19981027
	CA 2252240	AA	19990601		
	SG 72883	A1	20000523	SG 1998-4399	19981102
	AT 290234	E	20050315	AT 1998-309563	19981123
	TW 557412	B	20031011	TW 1998-87119507	19981124
	JP 11223945	A2	19990817	JP 1998-337103	19981127
	CN 1242528	A	20000126	CN 1998-123045	19981201
	CN 1114841	B	20030716		
	TW 562996	B	20031121	TW 1999-88104038	19990316
	CA 2266607	C	20020226	CA 1999-2266607	19990319
	CA 2266607	AA	19991202		
	JP 2000003035	A2	20000107	JP 1999-129219	19990510
	SG 80032	A1	20010417	SG 1999-2520	19990520
	KR 2000005718	A	20000125	KR 1999-19154	19990527
	EP 962827	A2	19991208	EP 1999-304213	19990528
	EP 962827	A3	20000607		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

CN 1237720 A 19991208 CN 1999-108303 19990602  
 CN 1103065 B 20030312  
 PRAI US 1997-980686 A 19971201  
 US 1997-982199 A 19971201  
 US 1998-88561 A 19980602  
 US 1998-118626 A 19980717  
 OS MARPAT 131:80774  
 AB A neg.-acting photoimaging composition useful as a photoresist for  
 manufacturing  
 printed circuit boards comprises (A) 30 to 70 weight% of organic binder  
 polymers  
 having a sufficient acid functionality to render the photoimaging composition  
 developable in an alkaline aqueous solution and comprising 3 to 65 weight% of  
 a polymer  
 having a weight-average mol. weight of 5000 to 40,000 and a Tg of 40 to 100°  
 and 5 to 67 weight% of a polymer having a weight-average mol. weight of 41,000  
 to  
 200,000 and a Tg of 40 to 100°, (B) 30 to 60 weight% of  
 $\alpha,\beta$ -ethylenically unsatd. compds. comprising an isocyanate  
 trimer having a tri- $\alpha,\beta$ -ethylenically unsatd. functionality,  
 the trimer being present at 2 to 30 weight%, and 0 to 5 weight% of other  
 $\alpha,\beta$ -ethylenically unsatd. compds., at least about 50 mol  
 percent of the  $\alpha,\beta$ -ethylenically unsatd. functionality being a  
 methacrylate functionality, and (C) 0.5 to 15 weight% of a  
 radiation-sensitive free radical-generating **photoinitiator**  
 system comprising 0.005 to 3 weight% of triphenylphosphine and 0.005 to 2  
 weight% of phenylglycine.  
 IT **6143-80-2**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (neg. photoimaging and photoresist compns. containing photopolymerizable  
 urethane oligomers and)  
 RN 6143-80-2 CAPLUS  
 CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 1707-67-1  
 CMF C21 H15 Cl N2

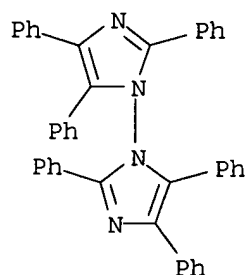


L10 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1998:226771 CAPLUS  
 DN 128:302121  
 TI Negative-working, peel-developable, single-sheet color proofing system  
 with poly(vinyl acetal) photoadhering layer  
 IN Hsieh, Shane; Koenigkramer, Rusty; Liu, Shuchen; Shadrach, Richard;  
 Siegfried, David; Wilczak, Wojciech  
 PA Bayer Corp., USA  
 SO U.S., 9 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5738970	A	19980414	US 1997-823766	19970324
	AU 9859479	A1	19980924	AU 1998-59479	19980323
	CA 2233110	AA	19980924	CA 1998-2233110	19980323
	EP 867768	A1	19980930	EP 1998-200878	19980323
	EP 867768	B1	20020102		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 10293399	A2	19981104	JP 1998-74044	19980323
	BR 9800960	A	19991123	BR 1998-960	19980324
PRAI	US 1997-823766	A	19970324		

AB A neg.-acting color proofing element comprises, sequentially, (A) a strippable, transparent cover sheet, (B) a crosslinked layer, which comprises a polymer having phenolic groups, (C) a color layer, which comprises an organic binder, a polymerizable monomer, a colorant, and an optional **photoinitiator**, (D) a photoadhering layer, which comprises a polymerizable component having at least one ethylenically unsatd. group, a polymer comprising poly(vinyl acetal) and poly(vinyl alc.) segments, having from about 1 to about 40 weight% poly(vinyl alc.) content, and an optional **photoinitiator**, wherein at least one of the color layer and the photoadhering layer contains a **photoinitiator**, (E) a thermoplastic adhesive layer, and (F) a receiver sheet. Preferably the polymerizable component and **photoinitiator** diffuse into the color layer during assembly of the element. An image is produced by laminating the photosensitive element to a receiver sheet, imagewise exposing the color layer and the photoadhering layer to actinic radiation through the transparent cover and crosslinked phenolic layer, peeling apart the receiver sheet and the transparent cover sheet, leaving exposed areas of the color layer attached to the receiver sheet via the photoadhering layer and adhesive layer and unexposed areas being removed with the cover sheet and the crosslinked phenolic layer, thereby forming a colored neg. image on the receiver sheet. Preferably these image-producing steps are repeated at least once wherein another photosensitive element having a different colorant is transferred via its photoadhering and adhesive layers to the neg. image previously produced on the receiver sheet.

IT **811-32-5**, Bis(2,4,5-triphenyl)imidazole  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (neg.-working, peel-developable, single-sheet color proofing systems with photoadhering layers containing)  
 RN 811-32-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

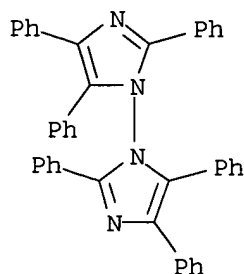
L10 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1997:740632 CAPLUS  
 DN 127:339253

TI Negative-working color proofing method  
 IN Koletar, Gabor I.  
 PA Bayer A.-G., USA  
 SO Can. Pat. Appl., 39 pp.  
 CODEN: CPXXEB  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2190921	AA	19970628	CA 1996-2190921	19961121
	US 5686221	A	19971111	US 1995-579658	19951227
	AU 9674067	A1	19970703	AU 1996-74067	19961129
	AU 700566	B2	19990107		
	BR 9606051	A	19980825	BR 1996-6051	19961218
	JP 09288353	A2	19971104	JP 1996-347923	19961226
PRAI	US 1995-579658	A	19951227		

AB A neg.-working color proofing method provides a photosensitive element having a cover sheet, a release layer having a polymer with phenolic groups, a color layer having a binder, a polymerizable monomer, a colorant, and an optional **photoinitiator**, and a photoadhering layer having a photosensitive polymer having unsatd., photocrosslinkable groups and a mol. weight greater than about 3000, a polymerizable monomer having at least one unsatd. group, and an optional **photoinitiator**. At least one of the color layer and the photoadhering layer has a **photoinitiator** and a thermoplastic adhesive layer. A photomask is applied onto the thermoplastic adhesive layer and the photosensitive element is imagewise exposed to actinic radiation through the photomask. After removing the photomask, the photosensitive element is laminated to a temporary receiver. After peeling apart the temporary receiver and the cover sheet, exposed areas of the color layer attach to the temporary receiver and unexposed areas are removed with the cover sheet thereby forming a colored neg. image on the temporary receiver sheet. These steps are optionally repeated with another photosensitive element having a different colorant and adhere an image to the image previously produced on the temporary receiver sheet. The temporary receiver sheet is laminated to a permanent receiver sheet via the images with heat and pressure. The temporary receiver sheet is optionally removed.

IT **811-32-5**, Bis(2,4,5-triphenyl)imidazole  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (neg.-working peel-apart photosensitive materials for color proofing containing)  
 RN **811-32-5** CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1994:641861 CAPLUS  
 DN 121:241861  
 TI Photothermal recording materials with improved coloring properties

IN Fukushima, Juichi; Iwakura, Ken; Washisu, Shintaro  
 PA Fuji Photo Film Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06115246	A2	19940426	JP 1992-263568	19921001
PRAI	JP 1992-263568		19921001		

AB The title materials comprise a support coated with a layer containing electron-donating colorless dye-containing microcapsules and, as an electron-accepting compound, a phenol derivative I [R1 = H, halo, alkyl, alkoxy, (substituted) Ph; R2 = (meth)acryloyl-containing alkyl; R3 = H, alkyl]. The materials provide high d. images and low d. background with good storage stability. Thus, a composition containing 3,3-bis(1-octyl-2-methylindol-3-yl)phthalide-containing microcapsules, 2-chloro-4-(N-methyl-N-β-methacryloyloxyethylsulfamoyl)phenol, and 2-o-chlorophenyl-4,5-diphenylimidazole dimer (**photoinitiator**) was coated on a PET film support, and a protective layer coated thereon to give a recording sheet.

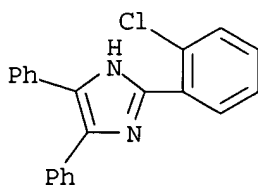
IT **6143-80-2**, 2-o-Chlorophenyl-4,5-diphenylimidazole dimer  
 RL: USES (Uses)  
 (photopolymn. initiator, photothermal recording material  
 electron-accepting layer containing)

RN 6143-80-2 CAPLUS  
 CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

CM 1

CRN 1707-67-1

CMF C21 H15 Cl N2



L10 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:446610 CAPLUS

DN 121:46610

TI Negative working, peel developable, single sheet color proofing system having a crosslinked layer containing a polymer with phenolic moieties

IN Wilczak, Wojciech A.

PA Hoechst Celanese Corp., USA

SO U.S., 10 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

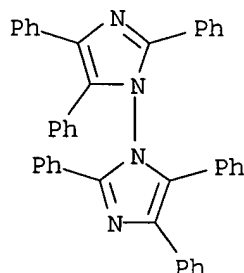
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5300399	A	19940405	US 1993-6879	19930121
	CA 2151264	AA	19940804	CA 1994-2151264	19940119
	WO 9417451	A1	19940804	WO 1994-US705	19940119

W: CA, JP  
 RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
 EP 680625 A1 19951108 EP 1994-907847 19940119  
 EP 680625 B1 19990324  
 R: BE, CH, DE, DK, FR, GB, IT, LI, NL, SE  
 JP 08507157 T2 19960730 JP 1994-517174 19940119  
 PRAI US 1993-6879 A 19930121  
 WO 1994-US705 W 19940119

AB In the title system a neg.-acting color proofing element is produced comprising, sequentially, a strippable cover sheet which is transparent to actinic radiation; a crosslinked layer containing a polymer having phenolic groups; a color layer, containing a colorant, a polymeric binder, a polymerizable monomer and, optionally, a **photoinitiator**; a photo-adhering layer, containing a linear photosensitive polymer containing ethylenically unsatd., free-radical polymerizable groups and having a mol. weight >3000, a polymerizable monomer, and, optionally, a free radical **photoinitiator**; a thermoplastic adhesive layer; and a receiver sheet,  $\geq 1$  of the color layer and the photo-adhering layer containing the **photoinitiator**.

IT **811-32-5**, Bis(2,4,5-triphenylimidazole)  
 RL: USES (Uses)  
 (peel developable color proofing sheet containing)

RN 811-32-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1994:257454 CAPLUS  
 DN 120:257454  
 TI Visible light-sensitive photopolymerizable compositions  
 IN Smothers, William K.  
 PA du Pont de Nemours, E. I., and Co., USA  
 SO U.S., 13 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

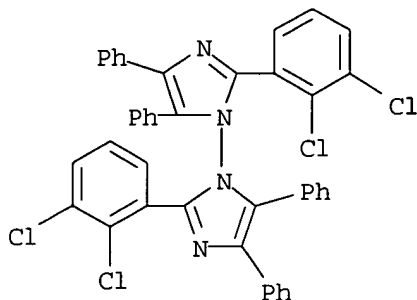
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5236808	A	19930817	US 1992-867492	19920413
	WO 9321236	A1	19931028	WO 1993-US3434	19930412
	W: CA, JP, KR				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 636148	A1	19950201	EP 1993-912203	19930412
	EP 636148	B1	19961009		
	R: DE, FR, GB				
	JP 07505911	T2	19950629	JP 1993-518544	19930412
	JP 3299274	B2	20020708		
	US 5484927	A	19960116	US 1994-292199	19940819
PRAI	US 1992-867492	A	19920413		

WO 1993-US3434 W 19930412  
US 1993-46913 B2 19930415

AB Photopolymerizable compns. which are sensitive to laser radiations in the red spectral regions and can be used in preparing printing plates, color proofs, or resist patterns comprise **photoinitiator** compns. absorbing in the visible spectral regions and comprising a sensitizer represented by the formula I [R1 = H, (substituted) C1-8 alkyl, CH2:CHCO, CH2:C(CH3)CO, or R12CO where R12 = (substituted) C5-10 aryl or (substituted) C1-8 alkyl; R2, R3 = II or III where n = 0 or 1; R4, R5 = H, Cl, OH, C1-6 alkyl, C1-6 alkoxy; X = O, S, Se, NR13, or CR14R15 where R13-15 = C1-6 alkyl or (substituted) Ph; R6 = H or (substituted) C1-4 alkyl; R7 = (substituted) C1-8 alkyl, or (substituted) C5-10 aryl; R8-11 = H, halogen, dialkylamino, (substituted) C1-6 alkyl, (substituted), C1-6 alkoxy, (substituted) C1-6 thialkoxy, or (substituted) Ph with the proviso that R8 and R9, R9 and R10, or R10 and R11 may be joined to form a (substituted) 5-10-membered aromatic ring].

IT **111010-84-5**  
RL: USES (Uses)  
(photoinitiating compns. containing tropanone derivative sensitizers and, for visible light-sensitive photopolymerizable compns.)

RN 111010-84-5 CAPLUS  
CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2,3-dichlorophenyl)-4,4',5,5'-tetraphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 1992:623058 CAPLUS  
DN 117:223058  
TI Electrophotographic peel-apart color proofing material  
IN Platzer, Stephan J. W.; Von Trebra, Robert J.; Seeley, Douglas A.; Shaw, Sonya Y.  
PA Hoechst Celanese Corp., USA  
SO Can. Pat. Appl., 70 pp.  
CODEN: CPXXEB  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2050947	AA	19920311	CA 1991-2050947	19910909
	AU 9183681	A1	19920416	AU 1991-83681	19910905
	EP 476904	A2	19920325	EP 1991-308227	19910909
	R: BE, CH, DE, FR, GB, IT, LI, LU, NL				
	JP 06095367	A2	19940408	JP 1991-258403	19910910
PRAI	US 1990-580338	A	19900910		

AB An electrophotog. peel-apart color proofing material comprises (a) a transparent support, (b) a transparent electroconductive layer on one side of the support, (c) a transparent photoconductive layer on the



electroconductive layer, (d) a colored photosensitive layer on the other side of the support, wherein the colored photosensitive layer comprises  $\geq 1$  colorant,  $\geq 1$  photosensitive component selected from the group consisting of polymeric diazonium salt, s o-quinonediazides, and photopolymerizable compns. comprising a free-radical polymerizable component having  $\geq 1$  ethylenically unsatd. group and a **photoinitiator**, and  $\geq 1$  biner, wherein the photosensitive component is present in a sufficient amount to provide an image differentiation when the colored photosensitive layer is imagewise exposed to an actinic radiation through the photoconductive layer, and (e) an optional adhesive layer directly adhered to the colored photosensitive layer and comprising a thermoplastic resin having a glass transition

temperature

of 25-100°.

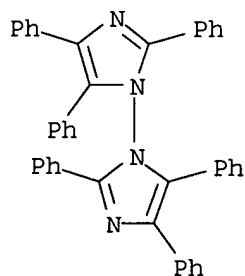
IT **811-32-5**, Bis(2,4,5-triphenyl)imidazole

RL: TEM (Technical or engineered material use); USES (Uses)

(colored photosensitive layers containing, for peel-apart electrophotog. photoreceptors for color-proofing)

RN 811-32-5 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:581867 CAPLUS

DN 117:181867

TI Photothermal recording materials using polymerizable phenol derivative as electron-acceptor

IN Fukushima, Yuichi; Iwakura, Ken; Washisu, Shintaro

PA Fuji Shashin Film K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04107558	A2	19920409	JP 1990-227424	19900829
PRAI	JP 1990-227424		19900829		

AB The material consists of a support coated with a recording layer comprising microcapsules containing electron-donating colorless dye, and phenol derivative electron-accepting compound having  $\geq 2$  polymerizable ethylenic double bond. The material shows high sensitivity and gives stable images.

IT **6143-80-2**, 2-o-Chlorophenyl-4,5-diphenylimidazole dimer

RL: USES (Uses)

(**photoinitiator**, photothermal recording material using, with polymerizable phenolic compound)

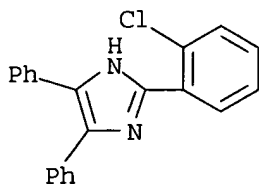
RN 6143-80-2 CAPLUS

CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

CM 1

CRN 1707-67-1

CMF C21 H15 Cl N2



L10 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1991:618927 CAPLUS

DN 115:218927

TI Storage stable photopolymerizable composition and element for refractive index imaging

IN Smothers, William K.

PA du Pont de Nemours, E. I., and Co., USA

SO U.S., 13 pp. Cont.-in-part of U.S. Ser. No. 144,281, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4994347	A	19910219	US 1988-288916	19881223
	AU 8928481	A1	19890720	AU 1989-28481	19890113
	AU 603499	B2	19901115		
	BR 8900155	A	19890912	BR 1989-155	19890113
	CN 1035004	A	19890823	CN 1989-100196	19890114
PRAI	US 1988-144281	B2	19880115		

AB A storage-stable solid photopolymerizable composition which undergoes changes in n upon exposure to light and is useful for preparing optical elements, especially holograms comprises (a) a thermoplastic polymeric binder, (b) N-vinylcarbazole, and (c) a hexaarylbiimidazole **photoinitiator** system having a H donor component which is preferably a mercapto compound having a pKHPvalue >8.0 as measured in MeOH with a glass electrode calibrated with an aqueous buffer. The photopolymerizable composition may also contain  $\geq 1$  liquid ethylenically unsatd. monomer capable of addition polymerization having a b.p. >100° and a plasticizer selected from glyceryl tributyrat, tris(2-ethylhexyl)phosphate, and compds. having the general formula  $R_1CO(OCH_2CH_2)_xOCOR_2$ ,  $R_1OCO(CH_2)_yCO_2R_2$ , or  $R_3(OCH_2CHR_4)_zOH$  ( $R_1, R_2 = C_1-10$  alkyl;  $R_3 = H, C_8-16$  alkyl;  $R_4 = H, Me$ ;  $x = 1-4$ ;  $yr = 2-20$ ;  $z = 1-20$ ).

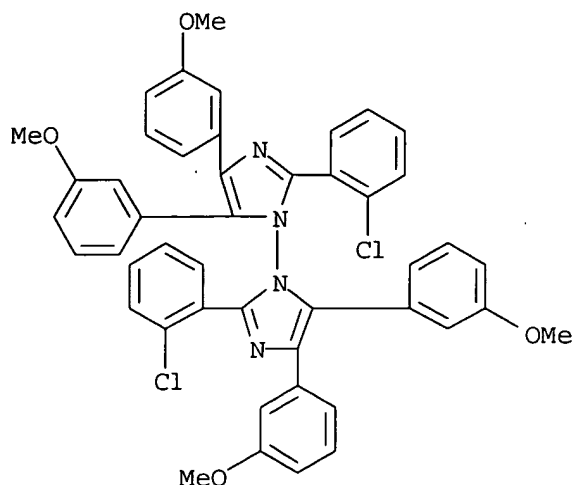
IT **29777-36-4**

RL: USES (Uses)

(photopolymerizable composition containing, for holog)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1991:72333 CAPLUS

DN 114:72333

TI Pigment transfer to photopolymerizable positive-working imaging system

IN Platzner, Stephan J. W.; Wanat, Stanley F.

PA Hoechst Celanese Corp., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4935331	A	19900619	US 1988-261382	19881021
	CA 2000575	AA	19900421	CA 1989-2000575	19891012
	AU 8943580	A1	19900531	AU 1989-43580	19891020
	AU 615352	B2	19910926		
	JP 02176753	A2	19900709	JP 1989-274762	19891021
	JP 04070628	B4	19921111		
PRAI	US 1988-261382	A	19881021		

AB A method of making a color image by, dry transfer on a photosensitive layer comprises: a transparent removable support coated with a photosensitive layer; a removable substrate coated with a color transfer layer; exposure of the photosensitive layer; and lamination of the colored layer and peeling to form an image due to preferred adhesion of the colored layer to the nonexposed areas of the photopolymer layer. The color transfer layer contains  $\geq 1$  colorant and  $\geq 1$  binding resin. The photosensitive layer contains a binding resin, a free radical polymerizable acrylate or methacrylate component, and a **photoinitiator**. The method can be used for color proof production for printing plates.

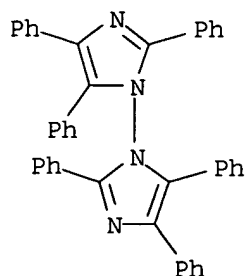
IT 811-32-5

RL: USES (Uses)

(photopolymer. initiator)

RN 811-32-5 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1990:506471 CAPLUS

DN 113:106471

TI Photopolymerizable, positive-working, peel-developable, single-sheet color proofing system

IN Platzer, Stephan J. W.

PA Hoechst Celanese Corp., USA

SO Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 352055	A2	19900124	EP 1989-307244	19890718
	EP 352055	A3	19900711		
	EP 352055	B1	19960103		
	R: BE, CH, DE, FR, GB, IT, LI, LU, NL				
	US 4895787	A	19900123	US 1988-220479	19880718
	JP 02066547	A2	19900306	JP 1989-184408	19890717
	JP 05049977	B4	19930727		
	CA 1336947	A1	19950912	CA 1989-605893	19890717
	AU 8938184	A1	19900118	AU 1989-38184	19890718
	US 5049476	A	19910917	US 1990-463075	19900110
	CA 2033703	AA	19910711	CA 1991-2033703	19910107
	JP 07064283	A2	19950310	JP 1991-12824	19910109
	JP 2982080	B2	19991122		
	AU 9169241	A1	19910711	AU 1991-69241	19910110
	US 5236806	A	19930817	US 1991-714792	19910613
PRAI	US 1988-220479	A	19880718		
	US 1990-463075	A	19900110		

AB A photosensitive element and a method of imaging comprising photoexposure and thermal and pressure transfer are described in which the element comprises: a transparent support; a photosensitive layer containing organic resin

binder, a colorant, a **photoinitiator**, and a free-radical polymerizable (meth)acrylate component; and an adhesive layer comprising a thermoplastic resin having a Tg of 25-100°. The material is useful as a color-proofing film to accurately predict the color image quality from lithog. printing.

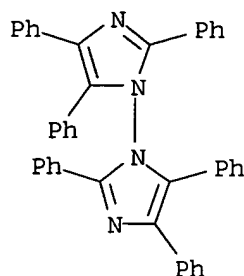
IT 811-32-5

RL: USES (Uses)

(photosensitive composition containing, for color-proofing film for lithog.)

RN 811-32-5 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1989:644393 CAPLUS  
 DN 111:244393  
 TI Solid photopolymerizable composition for holography  
 IN Smothers, William Karl  
 PA du Pont de Nemours, E. I., and Co., USA  
 SO Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN. CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 324481	A2	19890719	EP 1989-100496	19890112
	EP 324481	A3	19890927		
	EP 324481	B1	19930505		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	AT 89086	E	19930515	AT 1989-100496	19890112
	AU 8928481	A1	19890720	AU 1989-28481	19890113
	AU 603499	B2	19901115		
	BR 8900155	A	19890912	BR 1989-155	19890113
	CN 1035004	A	19890823	CN 1989-100196	19890114
PRAI	US 1988-144281	A	19880115		
	EP 1989-100496	A	19890112		

OS MARPAT 111:244393

AB A storage-stable solid photopolymerizable composition which undergoes changes in refractive index upon exposure to light and is useful for preparing optical elements, especially holograms comprises (a) a thermoplastic polymeric binder, (b) N-vinylcarbazole, and (c) a hexaarylbiimidazole **photoinitiator** system having a H donor component which is preferably a mercapto compound having a pKHPvalue >8.0 as measured in MeOH with a glass electrode calibrated with an aqueous buffer. The photopolymerizable composition may also contain ≥1 liquid ethylenically unsatd. monomer capable of addition polymerization having a b.p. >100° and a plasticizer selected from glyceryl tributyrate, tris(2-ethylhexyl)phosphate, and compds. having the general formula  $R_1CO(OCH_2CH_2)_xOCOR_2$ ,  $R_1OCO(CH_2)_yCO_2R_2$ , or  $R_3(OCH_2CHR_4)_zOH$  ( $R_1, R_2 = C_1-10$  alkyl;  $R_3 = H, C_8-16$  alkyl;  $R_4 = H, Me$ ;  $x = 1-4$ ;  $y = 2-20$ ;  $z = 1-20$ ).

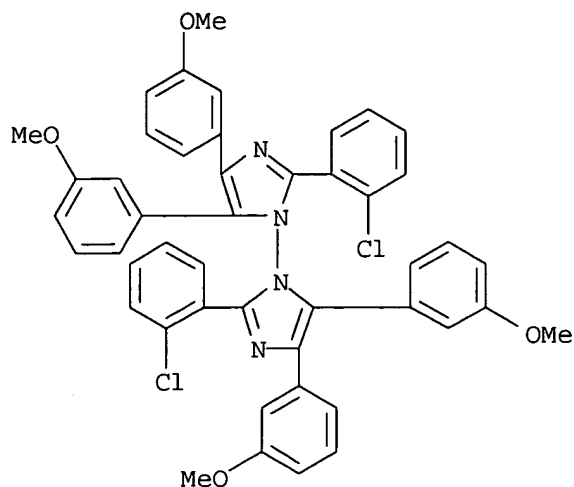
IT 29777-36-4

RL: USES (Uses)

(photopolymerizable compns. containing vinylcarbazole and thermoplastic dimer and, for reflection hologram formation)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1987:415608 CAPLUS

DN 107:15608

TI Light-sensitive lithographic printing plate

IN Akiyama, Keiji; Kita, Nobuyuki

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61267055	A2	19861126	JP 1985-108986	19850521
PRAI	JP 1985-108986		19850521		

AB A light-sensitive lithog. printing plate comprises (1) a ground and anodized Al plate, (2) a photopolymerizable light-sensitive layer coated on the plate and (3) a H<sub>2</sub>O soluble O-insulating layer (1.5-0.1 g/m<sup>2</sup>) provided on the light-sensitive layer. The light-sensitive layer incorporated (a) an ethylenic unsatd. compound capable of addition polymerization and being in liquid state at normal temperature, (b) an alkali-soluble or alkali-swellable polymer capable of forming a film, (c) a **photoinitiator** and (d) a higher fatty acid which is in solid state at normal temperature. The printing plate is relatively insensitive to O at imaging exposure stage and has improved development characteristics. Thus, a photopolymerizable mixture of benzyl methacrylate-methacrylic acid copolymer (75/25 in mol. ratio), dipentaerythritol hexacrylate, 2-(o-chlorophenyl)-4,5-bis(m-methoxyphenyl)imidazolyl dimer, 4,4-bis(dimethylamino)benzophenone, an oil-soluble blue dye (C.I. 42595), nonadecanoic acid, etc. was applied on an anodized Al plate. Then, a poly(vinyl alc.) (saponification degree 86.5-89.0%, polymerization degree 1000) aqueous soln (3 weight%) was overcoated as an O-insulating layer. It had a more extended gray scale and a less tendency to deteriorate the developing solution compared to the controls which did not contain the nondecanoic acid or did not have the overcoat layer.

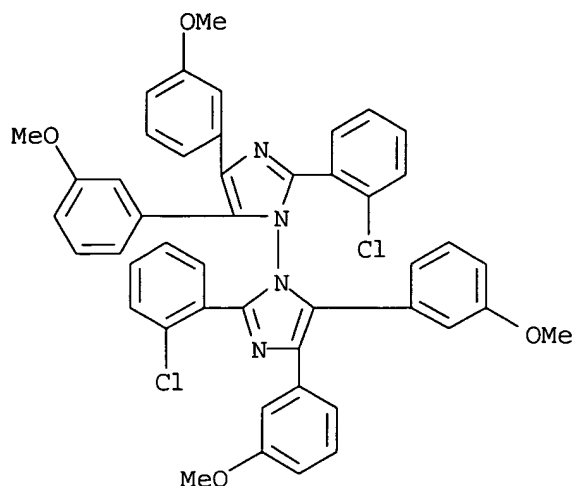
IT 29777-36-4

RL: USES (Uses)

(photoimaging composition containing fatty acids and)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1986:139334 CAPLUS

DN 104:139334

TI Alkali developable photopolymer crystalline composition

IN Dueber, Thomas E.; Nebe, William J.

PA du Pont de Nemours, E. I., and Co., USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4555473	A	19851126	US 1984-678884	19841206
PRAI	US 1984-678884		19841206		

AB A photopolymeric crystalline composition is described useful as photoresist for printing circuits fabrication, in chemical milling, as solder mask or in graphic arts applications. The composition which exhibits high photoimaging speed, improved development latitude and coating properties contains  $\geq 1$  ethylenically unsatd. monomer,  $\geq 1$  **photoinitiator**,  $\geq 1$  acidic polymer binder and a crystalline matrix forming compound having a m.p. in the range of 50-200°. Thus, a poly(ethylene terephthalate) support was coated with a composition containing

1,2-diphenoxyethane

125, octylarylamide-Me methacrylate-acrylic acid-hydroxypropyl methacrylate-tert-butylaminoethyl methacrylate copolymer 136.5, Et acrylate-Me methacrylate-acrylic acid copolymer 7.5, ethylene oxide condensate with Merpol HC 7.5, trimethylolpropane trisarylate 135, Michler's ketone 0.5, bentophenone 20, tri(p-N,N-dimethylaminophenyl)methane 1, bis(2-o-chlorophenyl-4,5-diphenylimidazole 17.5, benzotriazole 1, Victoria green 0.35, polyethylene 45, CH<sub>2</sub>Cl<sub>2</sub> 1183, MeOH 103 g at a thickness of 0.0033 cm, dried at 52.7°, and laminated with a polyethylene cover sheet. The element was then laminated (after removal of the cover sheet) to a Cu surfaced epoxy board at 115.6°, imagewise exposed (2000 W Hg lamp), developed (after removal of the support) with a 1% solution of Na<sub>2</sub>CO<sub>3</sub> for 90 s at 40.6° to give an image.

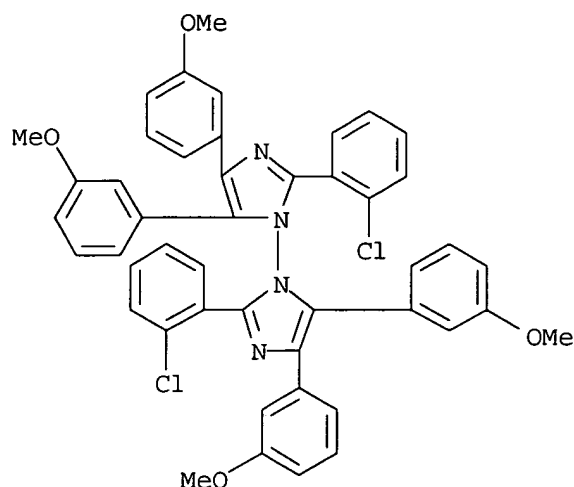
IT **29777-36-4**

RL: USES (Uses)

(photopolymeric crystalline composition containing, for imaging applications)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:541162 CAPLUS

DN 101:141162

TI Opaque image formation in toned photopolymer layers using leaching solution

IN Chu, Victor F.

PA USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4454217	A	19840612	US 1982-433413	19821008
PRAI	US 1982-433413		19821008		

AB A process is described of formation of white opaque images in the toned areas of a photopolymer composition comprising a leachable monomer, a **photoinitiator**, an organic polymer binder, and optionally a plasticizer. The process which is useful for the preparation of overlay exhibits and direct pos. images for microfilms involves treatment of the toned image areas with a leaching solution like mixts. of organic solvents or mixts. of H<sub>2</sub>O and organic solvents, washing the treated areas with H<sub>2</sub>O, and drying at ≤70°. Thus, a subbed poly(ethylene terephthalate) support was coated with a composition containing Me methacrylate-methacrylic

acid

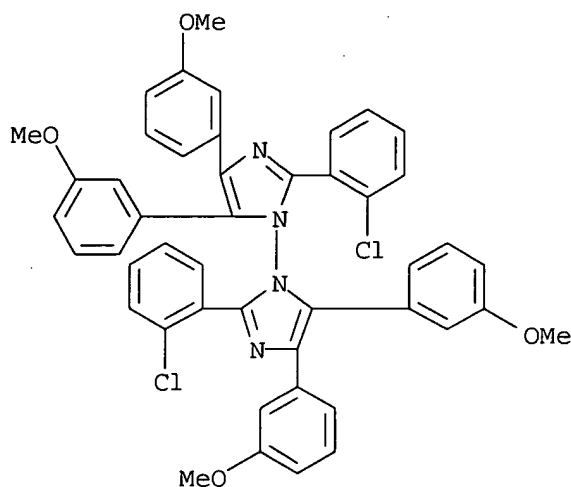
copolymer 9, trimethylolpropane trimethacrylate 8.69, polyoxyethylene lauryl ether 1.58, 2-o-chlorophenyl-4,5-bis(m-methoxyphenyl)imidazolyl dimer 0.318, 2-mercaptobenzothiazole 0.182, 2-(stilby-4'')-(naphtho-1',2',4,5)-1,2,3-triazole-2''-sulfonic acid Ph ester 0.212, and CH<sub>2</sub>Cl<sub>2</sub> to 160 g to produce a dry coating weight of 139.2 mg/dm<sup>2</sup>, laminated with a poly(ethylene terephthalate) cover sheet containing a silicone release layer, imagewise exposed through the cover sheet, and toned with magenta toner (after removal of the cover sheet) Pigment Red 122. The excess toner was removed by wiping with a cotton cloth so that only the unexposed areas had the toner adhering to the surface. The film was soaked for 1 min in a solution containing 1-propanol 30, Me<sub>2</sub>CO 30, and H<sub>2</sub>O 30 mL, washed, and dried

to

show an opaque white image in unexposed areas.



IT 29777-36-4  
 RL: USES (Uses)  
 (photopolymer layer containing, opaque image formation in toned areas of,  
 leaching solns. for)  
 RN 29777-36-4 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:446322 CAPLUS

DN 101:46322

TI N-Alkylindolylidene and N-alkylbenzothiazolylidene alkanones as sensitizers for photopolymer compositions

IN Dueber, Thomas Eugene; Link, William J.

PA du Pont de Nemours, E. I., and Co. , USA

SO Eur. Pat. Appl., 46 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 103294	A1	19840321	EP 1983-108973	19830910
	EP 103294	B1	19861230		
	R: BE, DE, FR, GB				
	US 4454218	A	19840612	US 1982-417682	19820913
	JP 59074551	A2	19840427	JP 1983-166838	19830912
	JP 01043299	B4	19890920		
PRAI	US 1982-417682	A	19820913		

AB Visible light-sensitive photopolymerizable compns. for use in the production of printing plates, litho films, photoresists, solder masks, and image proofs are composed of  $\geq 1$  ethylenically unsatd. compound,  $\geq 1$  **photoinitiator** or **photoinitiator** system, a sensitizing amount of an N-alkylindolylidene or N-alkylbenzohazolidylidene alkanone, and optionally  $\geq 1$  organic polymer binder. Thus, a PET support was coated with a composition containing tetraethylene glycol dimethacrylate 0.2264, acrylic

acid-Et acrylate-Me methacrylate terpolymer 0.5327, maleic anhydride-styrene copolymer 0.5539, bis(2-o-chlorophenyl-4,5-diphenyl)imidazole 0.1298, 1-(oxacyclopenta-2,4-dien-2-yl)-2-(2,3-dihydro-3-methylnaphtho-3H-[1,2-d]thiazolylidene)-1-ethanone 0.0113, CH<sub>2</sub>Cl<sub>2</sub> 7.95, and MeOH 0.60 g, a PET cover sheet added, and the material exposed in a

vacuum frame to a 2000 W Hg photopolymer Addalux lamp and then developed in an alkaline developer to show 14 3√2 steps and a relative speed of 1.

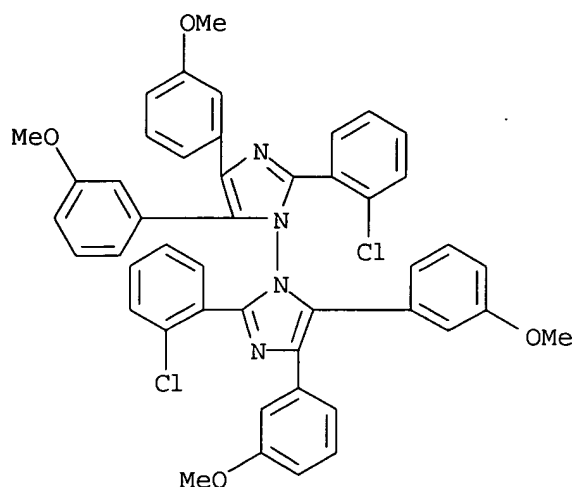
IT 29777-36-4

RL: USES (Uses)

(photoimaging compns. containing, N-alkylindolylidenealkanones and N-alkylbenzothiazolylidenealkanones as sensitizers for)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 20 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:59618 CAPLUS

DN 100:59618

TI Photopolymerizable polyamide ester resin compositions containing an oxygen scavenger

IN Goff, David L.; Yuan, Edward L.; Proskow, Stephen

PA du Pont de Nemours, E. I., and Co., USA

SO U.S., 4 pp. Cont.-in-part of U.S. 4,329,419.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 4414312	A	19831108	US 1981-334164	19811224
	US 4329419	A	19820511	US 1980-183648	19800903
	AU 8174822	A1	19820311	AU 1981-74822	19810901
	AU 543702	B2	19850426		
	JP 57076017	A2	19820512	JP 1981-136213	19810901
	JP 02033723	B4	19900730		
	CA 1165932	A1	19840417	CA 1981-384952	19810901
	GB 2083064	A	19820317	GB 1981-26576	19810902
	GB 2083064	B2	19840815		
	IL 63717	A1	19841231	IL 1981-63717	19810902
	ES 505185	A1	19830201	ES 1981-505185	19810903
	JP 02210712	A2	19900822	JP 1989-302294	19891122
PRAI	US 1980-183648	A2	19800903		

AB Heat-resistant photopolymerizable compns. for the formation of relief images on elec. devices, such as capacitors, integrated circuits, printed circuits, and semiconductors are composed of a polyamide ester, polymerizable polyfunctional acrylate, a photopolymn. initiator containing a H

donor initiator and an aromatic biimidazole, and an oxygen scavenger. These compns. produce relief structures with a sharp definition and having good mech., chemical, and elec. properties. Thus, a typical composition contained a polyamide ester resin (U.S. 4,329,419) 6.00, bis(2-o-chlorophenyl-4,5-diphenylimidazolyl) 0.36, Michler's ketone 0.18, mercaptobenzylthiazole 0.12, tetraethylene glycol diacrylate 0.90, N-methylpyrrolidone 10.00, and thinner 4.00 g.

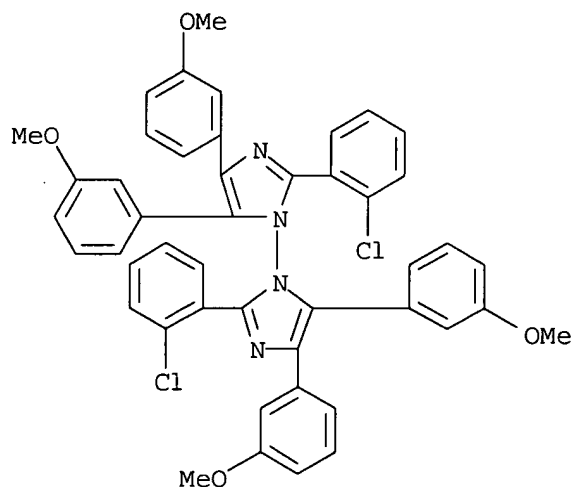
IT 29777-36-4

RL: USES (Uses)

(**photoinitiator**, in photopolymerizable composition containing polyamide ester for relief images)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 21 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1981:55930 CAPLUS

DN 94:55930

TI Photopolymerizable composition containing ethylenically unsaturated oligomers

IN Rousseau, Alan D.

PA Minnesota Mining and Manufacturing Co., USA

SO U.S., 17 pp. Cont.-in-part of U.S. Ser. No. 901,480, abandoned.

CODEN: USXXAM

DT Patent

LA English

FAN. CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 4228232	A	19801014	US 1979-15586	19790227
	SE 7903709	A	19791102	SE 1979-3709	19790427
	SE 444991	B	19860520		
	SE 444991	C	19860828		
	FR 2425094	A1	19791130	FR 1979-10908	19790427
	FR 2425094	B1	19850719		
	CA 1122999	A1	19820504	CA 1979-326501	19790427
	AU 7946503	A1	19791108	AU 1979-46503	19790430
	AU 524592	B2	19820923		
	DE 2917483	A1	19791115	DE 1979-2917483	19790430
	DE 2917483	C2	19910124		
	BR 7902646	A	19791127	BR 1979-2646	19790430
	JP 54144497	A2	19791110	JP 1979-53993	19790501

US 4304923 A 19811208 US 1980-109191 19800102  
 PRAI US 1978-901480 A2 19780501  
 US 1979-15586 A3 19790227

AB High speed light-sensitive photopolymer composition for printing plates which exhibit excellent adhesion to Al support, has high storage stability, resistance to O and moisture, base solubility, and produces tough polymers with long service life comprises ethylenically unsatd. carboxylic acid containing oligomer 10-60, organic film forming polymer (binder) 10-60, free radical polymerizable monomer having  $\leq 1$  ethylenically unsatd. group 10-60, and free radical **photoinitiator** system 0.1-12 weight%. Thus, a grained anodized Al plate was coated with a Solution A containing the reaction product of poly(vinyl alc.), poly(vinyl acetate), butyraldehyde and acrolein 7.72, n-PrOH-H<sub>2</sub>O azeotrope 327.4, pentaerythritol tetraacrylate 12.8, 60% azeotrope solution of carboxyl substituted urethane oligomer (reaction product of poly(caprolactone hexol) and 2,4-tolylene diisocyanate adduct with 2-hydroxyethyl methacrylate-2,4-tolylene diisocyanate adduct) 10.3, 20% azeotrope solution of Et<sub>3</sub>N, Pigment Red dispersed in Solution A and azeotrope (4:8:88) 15.7, diphenyliodonium hexafluorophosphate 1.3, 4,4'-bis(dimethylamino)benzophenone 0.65 g, at a coating weight 1.72 g/m<sup>2</sup>, imagewise exposed with 351 and 364 nm lines of Ar laser (at 4 mJ/cm<sup>2</sup> exposure), developed with basic aqueous solution (0.63% Na<sub>2</sub>SiO<sub>3</sub>, 0.23% Na naphthalenesulfonate), and gummed with com. subtractive plate gum, to give a printing plate which produced high quality impressions when mounted on a web offset press.

IT **6143-80-2 29777-36-4**

RL: USES (Uses)

(photoinitiation system containing, for photopolymerizable composition containing

ethylene polyunsatd. oligomers for printing plates)

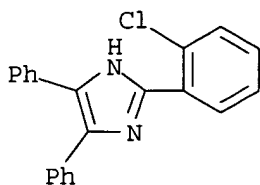
RN 6143-80-2 CAPLUS

CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

CM 1

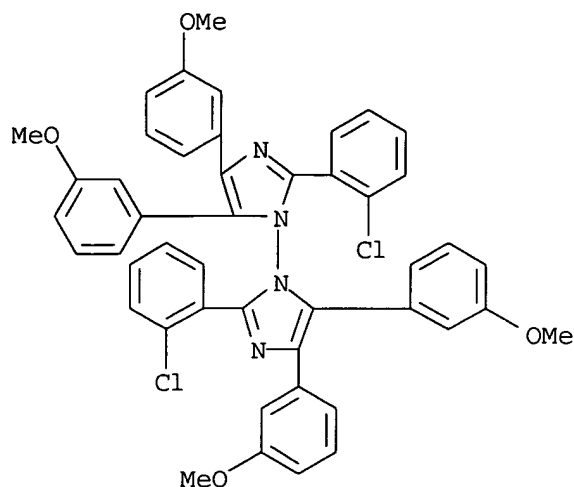
CRN 1707-67-1

CMF C21 H15 Cl N2



RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 22 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1980:172478 CAPLUS  
 DN 92:172478  
 TI Photopolymerization composition useful on printing plates  
 IN Rousseau, Alan David  
 PA Minnesota Mining and Manufacturing Co., USA  
 SO Brit. UK Pat. Appl., 22 pp.  
 CODEN: BAXXDU  
 DT Patent  
 LA English  
 FAN. CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2020297	A	19791114	GB 1979-14903	19790430
	GB 2020297	B2	19830427		
	SE 7903709	A	19791102	SE 1979-3709	19790427
	SE 444991	B	19860520		
	SE 444991	C	19860828		
	FR 2425094	A1	19791130	FR 1979-10908	19790427
	FR 2425094	B1	19850719		
	CA 1122999	A1	19820504	CA 1979-326501	19790427
	AU 7946503	A1	19791108	AU 1979-46503	19790430
	AU 524592	B2	19820923		
	DE 2917483	A1	19791115	DE 1979-2917483	19790430
	DE 2917483	C2	19910124		
	BR 7902646	A	19791127	BR 1979-2646	19790430
	JP 54144497	A2	19791110	JP 1979-53993	19790501
	GB 2104086	A	19830302	GB 1982-21270	19820722
	GB 2104086	B2	19830706		
PRAI	US 1978-901480	A	19780501		
	GB 1979-14903	A3	19790430		

AB The title compns. contain an organic film-forming polymer 10-60, a free radical-polymerizable ethylenically unsatd. monomer 10-60, a **photoinitiator** 0.1-12, and an acrylate-modified polyurethane 10-60%. Thus, a solution was prepared containing pentaerythritol tetraacrylate 3.32,  $\epsilon$ -caprolactone-dipentaerythritol-2-hydroxyethyl methacrylate-2,4-tolylene diisocyanate block copolymer 1.87, Ph2IPF6 0.34, Et3N 0.17, (Me2NC6H4-p)2CO 0.17, poly(vinyl butyral) 2.50, and PrOH/H2O azeotrope 91.62 parts. The solution was coated onto anodized Al, dried, exposed 13 s 1 m from a 5000 W C arc, and developed by wiping with a solution containing 0.63% Na metasilicate and 0.23% Na alkylnaphthalene sulfonate.

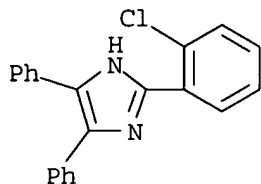
IT **6143-80-2 29777-36-4**  
 RL: USES (Uses)

(photosensitizer, for photocurable coatings for printing plates)

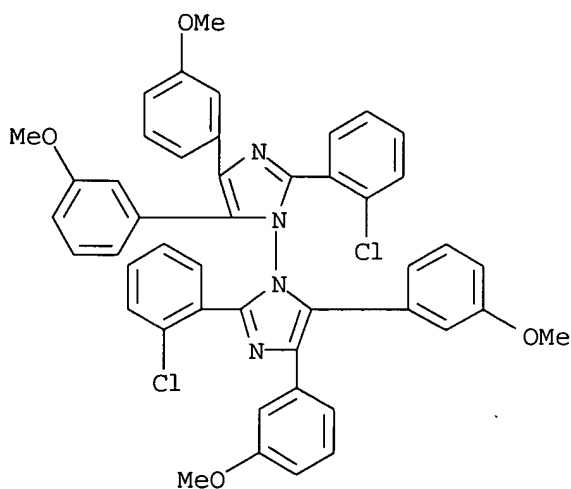
RN 6143-80-2 CAPLUS  
CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

CM 1

CRN 1707-67-1  
CMF C21 H15 Cl N2



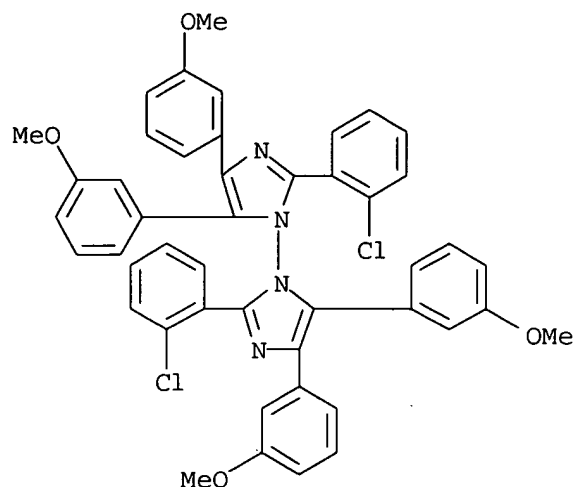
RN 29777-36-4 CAPLUS  
CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 23 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 1978:129061 CAPLUS  
DN 88:129061  
TI Photopolymerizable masses for preparing positive or negative images  
IN Pazos, Jose Francisco  
PA du Pont de Nemours, E. I., and Co., USA  
SO Ger. Offen., 51 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN. CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2710417	A1	19770929	DE 1977-2710417	19770310
	DE 2710417	B2	19791206		
	DE 2710417	C3	19800814		
	BE 852517	A1	19770916	BE 1977-175825	19770316
	GB 1547548	A	19790620	GB 1977-11110	19770316
	JP 52111985	A2	19770920	JP 1977-28752	19770317

	JP 58009936	B4	19830223		
	NL 7702887	A	19770920	NL 1977-2887	19770317
	NL 183583	B	19880701		
	NL 183583	C	19881201		
	US 4198242	A	19780608	US 1978-913906	19780608
	US 4269933	A	19810526	US 1979-80082	19790928
	GB 2068006	A	19810805	GB 1980-2778	19800128
	GB 2068006	B2	19830810		
	JP 56064338	A2	19810601	JP 1980-131747	19800924
PRAI	US 1976-667536	A	19760317		
	US 1977-758699	A	19770117		
	US 1978-913906	A3	19780608		
AB	<p>Photopolymerizable compns. for the preparation of polymeric pos. and neg. images are composed of an addition polymerizable nongas-forming ethylenically unsatd. compound, such as trimethylolpropane triacrylate, an aromatic nitro compound I (R = CH<sub>2</sub>OH, CHO, CH:CH<sub>2</sub>, PhN:CH, oxiranyl, iso-Pr, ClCH<sub>2</sub>, ethylenedioxyethyl, p-Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>N:CH, 3,5-bis(ethoxycarbonyl)-4,6-dimethyl-1,4-dihydropyridin-4yl; R<sub>1</sub>,R<sub>2</sub> = H, MeO) or II, an organic radiation-sensitive free-radical-forming compound, such as 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetraphenylbiimidazole, and a polyacrylate or poly(α-alkylacrylate). Thus, a solution containing triethylene glycol dimethacrylate 1.05, a maleic anhydride-styrene copolymer iso-Pr ester (mol. weight 1700, acid number 270) 1.18, an acrylic acid-Et acrylate-Me methacrylate copolymer (mol. weight 260,000, acid number 76-85) 0.30, colloidal carbon 0.30, triethylene glycol diacetate 0.10, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)biimidazole 0.09, 2-mercaptobenzothiazole 0.009, 2,5-bis(4'-diethylamino-2'-methylbenzylidene)cyclopentanone 0.036, 2-nitro-5-methoxybenzyl alc. 0.054, α-phenylimino-2-nitrotoluene 0.054 g, and methylene chloride 12.7 mL was coated on a resin-coated poly(ethylene terephthalate) support to give a dry layer of 5.1 μ thickness. A top layer of poly(ethylene terephthalate) was then added. For a neg. image the material was exposed for 90 s through a √2 step wedge with light having a wavelength &gt;380 nm. After exposure the top layer was removed and the nonpolymd. areas removed with an aqueous alkaline solution</p> <p>Some 4 steps were visible. For a pos. image the material was exposed for 60 s through a step wedge with light having a wavelength &lt;380 nm and then developed as above. Some 7 steps were visible.</p>				
IT	<p><b>29777-36-4</b>            RL: USES (Uses)            (photopolymerizable compns. containing aromatic nitro compound <b>photoinitiator</b> and, for photoimaging)</p>				
RN	29777-36-4 CAPLUS				
CN	1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)				



L10 ANSWER 24 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1976:97859 CAPLUS

DN 84:97859

TI Photopolymerizable compositions comprising initiator combinations comprising thioxanthenones

IN Chang, Catherine T. L.

PA du Pont de Nemours, E. I., and Co., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN. CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3926643	A	19751216	US 1974-470637	19740516
PRAI	US 1974-470637	A	19740516		

AB Thioxanthenone compds. are used in **photoinitiator** combinations in photopolymerizable compns. used primarily for the production of lithog. plates. The **photoinitiator** combinations provide layers with increased photospeed, good image quality, and reduced sensitivity to moisture and temperature Thus, a photopolymerizable composition for the production of a

lithog. printing plate is comprised of methyl methacrylate-methacrylic acid polymer 10, trimethylol propane triacrylate 3.75, mixed esters of triethylene glycol dicaprate and dicaprylate 1.25, MeCOEt 105, and **photoinitiator** mixture thioxanthenone 0.21 and 4,4'-bis(dimethylamino)benzophenone 0.268 g.

IT **29777-36-4**

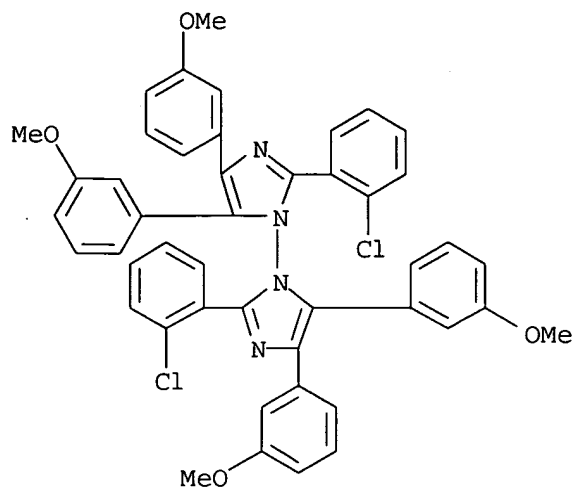
RL: USES (Uses)

(lithog. plate photopolymerizable composition containing **photoinitiator** combination containing)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)





=> d l10 1-24 hitstr

L10 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT **6143-80-2**, 2-(o-Chlorophenyl)-4,5-diphenylimidazole dimer

RL: TEM (Technical or engineered material use); USES (Uses)

(**photoinitiator**; photosensitive resin compns. containing ethylenically-unsatd. monomers having oxyethylene and oxybutylene units for preparation of printed circuit substrates with decreased sludge generation)

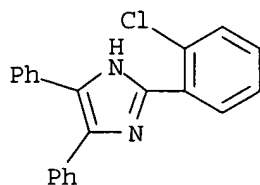
RN 6143-80-2 CAPLUS

CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

CM 1

CRN 1707-67-1

CMF C21 H15 Cl N2



L10 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

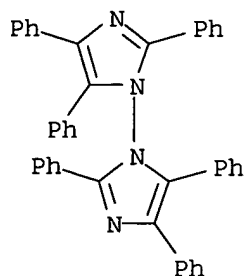
IT **811-32-5**

RL: CAT (Catalyst use); USES (Uses)

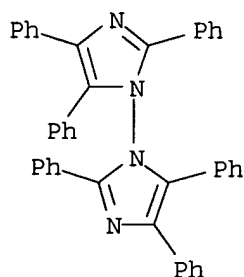
(hexaarylbiimidazoles and ketocyanine dyes as effective electron transfer in photoinitiating systems)

RN 811-32-5 CAPLUS

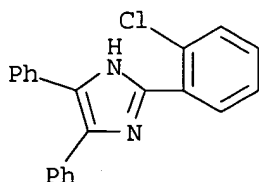
CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **811-32-5**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoinitiators for photopolymn. type pre-sensitized plates)  
 RN 811-32-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



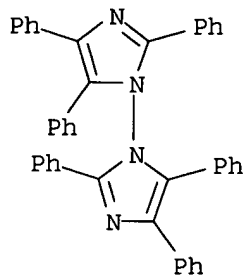
L10 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **6143-80-2**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (neg. photoimaging and photoresist compns. containing photopolymerizable urethane oligomers and)  
 RN 6143-80-2 CAPLUS  
 CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 1707-67-1  
 CMF C21 H15 Cl N2



L10 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **811-32-5**, Bis(2,4,5-triphenyl)imidazole  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (neg.-working, peel-developable, single-sheet color proofing systems with photoadhering layers containing)

RN 811-32-5 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



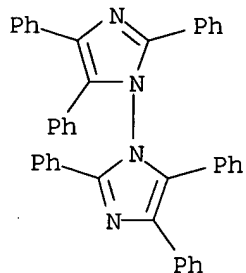
L10 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT 811-32-5, Bis(2,4,5-triphenyl)imidazole

RL: TEM (Technical or engineered material use); USES (Uses)  
(neg.-working peel-apart photosensitive materials for color proofing containing)

RN 811-32-5 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT 6143-80-2, 2-o-Chlorophenyl-4,5-diphenylimidazole dimer

RL: USES (Uses)

(photopolymn. initiator, photothermal recording material  
electron-accepting layer containing)

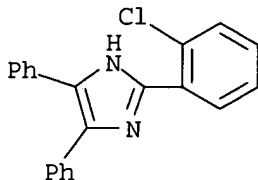
RN 6143-80-2 CAPLUS

CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

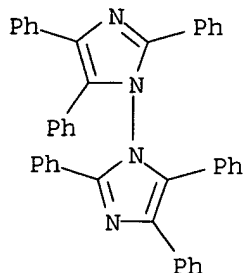
CM 1

CRN 1707-67-1

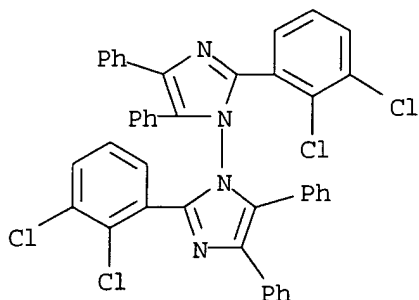
CMF C21 H15 Cl N2



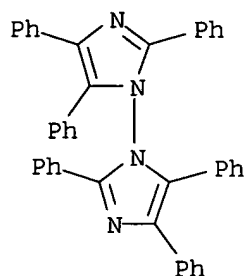
L10 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **811-32-5**, Bis(2,4,5-triphenylimidazole)  
 RL: USES (Uses)  
 (peel developable color proofing sheet containing)  
 RN 811-32-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



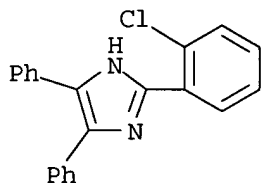
L10 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **111010-84-5**  
 RL: USES (Uses)  
 (photoinitiating compns. containing tropanone derivative sensitizers and,  
 for  
 visible light-sensitive photopolymerizable compns.)  
 RN 111010-84-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2,3-dichlorophenyl)-4,4',5,5'-tetraphenyl-  
 (9CI) (CA INDEX NAME)



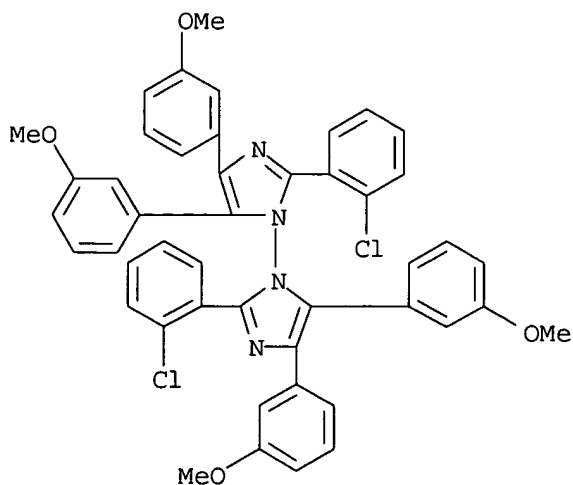
L10 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **811-32-5**, Bis(2,4,5-triphenyl)imidazole  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (colored photosensitive layers containing, for peel-apart electrophotog.  
 photoreceptors for color-proofing)  
 RN 811-32-5 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **6143-80-2**, 2-o-Chlorophenyl-4,5-diphenylimidazole dimer  
 RL: USES (Uses)  
 (photoinitiator, photothermal recording material using, with  
 polymerizable phenolic compound)  
 RN 6143-80-2 CAPLUS  
 CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 1707-67-1  
 CMF C21 H15 Cl N2



L10 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN  
 IT **29777-36-4**  
 RL: USES (Uses)  
 (photopolymerizable composition containing, for holog)  
 RN 29777-36-4 CAPLUS  
 CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-  
 methoxyphenyl)- (9CI) (CA INDEX NAME)



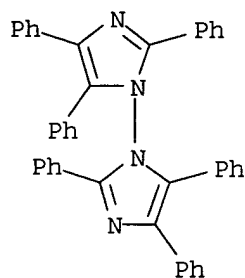
L10 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT **811-32-5**

RL: USES (Uses)  
(photopolymn. initiator)

RN 811-32-5 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



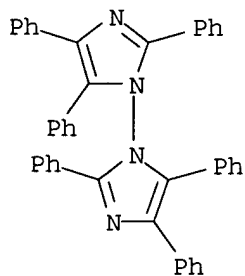
L10 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT **811-32-5**

RL: USES (Uses)  
(photosensitive composition containing, for color-proofing film for lithog.)

RN 811-32-5 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2',4,4',5,5'-hexaphenyl- (9CI) (CA INDEX NAME)



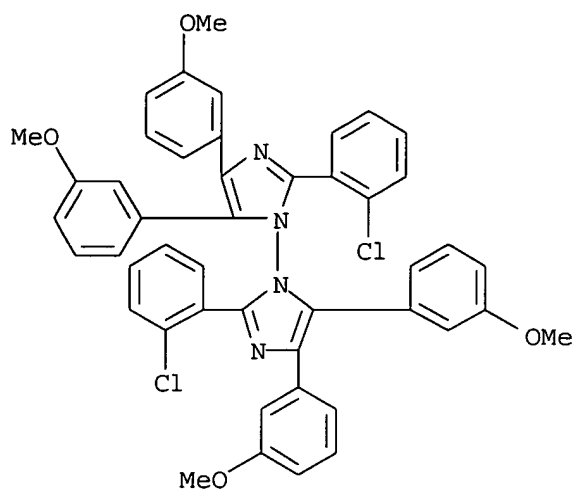
L10 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT **29777-36-4**

RL: USES (Uses)  
(photopolymerizable compns. containing vinylcarbazole and thermoplastic dimer and, for reflection hologram formation)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

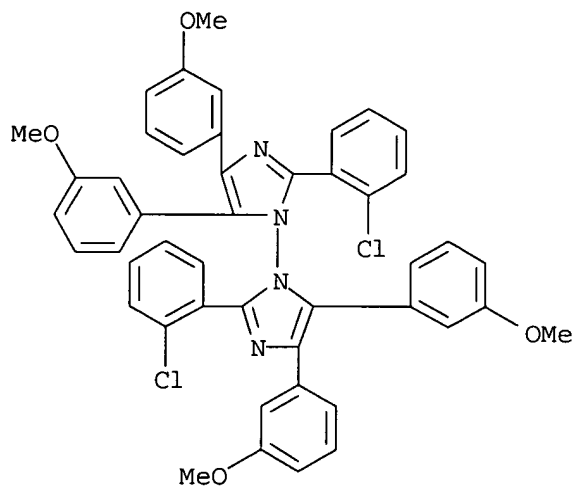
IT **29777-36-4**

RL: USES (Uses)

(photoimaging composition containing fatty acids and)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

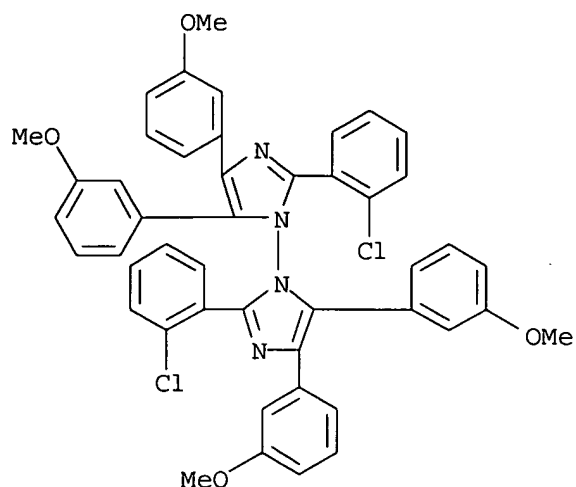
IT **29777-36-4**

RL: USES (Uses)

(photopolymeric crystalline composition containing, for imaging applications)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

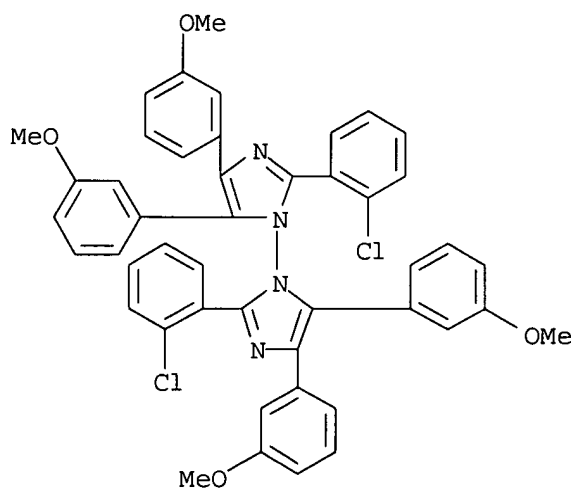
IT **29777-36-4**

RL: USES (Uses)

(photopolymer layer containing, opaque image formation in toned areas of, leaching solns. for)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT **29777-36-4**

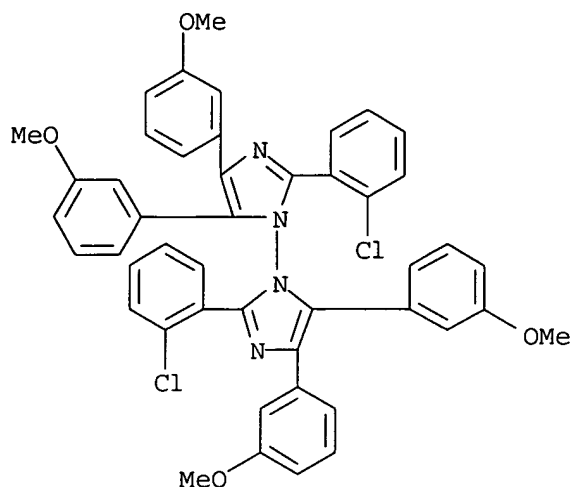
RL: USES (Uses)

(photoimaging compns. containing, N-alkylindolylidenealkanes and N-alkylbenzothiazolylidenealkanes as sensitizers for)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)





L10 ANSWER 20 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

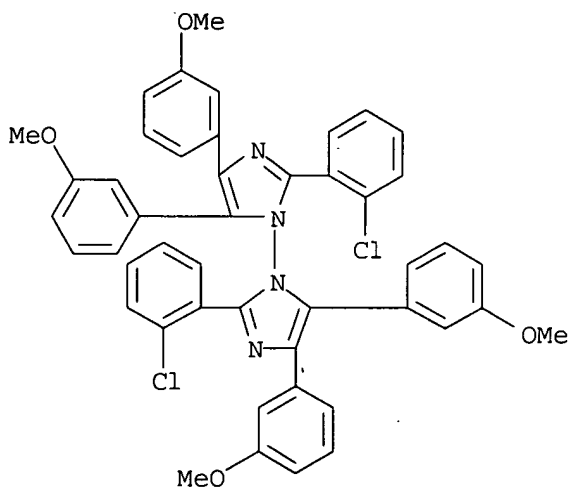
IT **29777-36-4**

RL: USES (Uses)

(**photoinitiator**, in photopolymerizable composition containing polyamide ester for relief images)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 21 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT **6143-80-2 29777-36-4**

RL: USES (Uses)

(photoinitiation system containing, for photopolymerizable composition containing

ethylene polyunsatd. oligomers for printing plates)

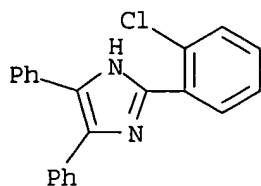
RN 6143-80-2 CAPLUS

CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

CM 1

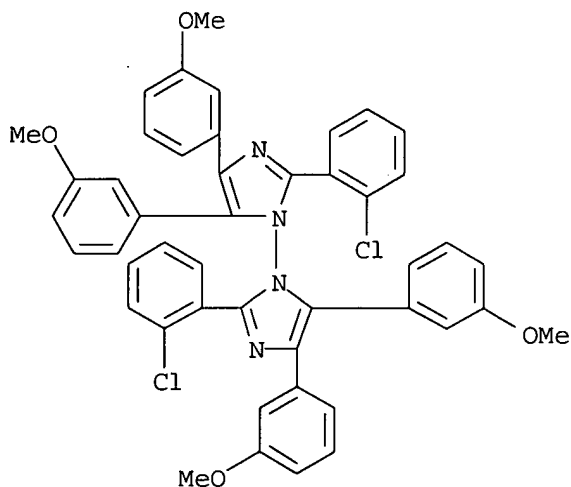
CRN 1707-67-1

CMF C21 H15 Cl N2



RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 22 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

IT 6143-80-2 29777-36-4

RL: USES (Uses)

(photosensitizer, for photocurable coatings for printing plates)

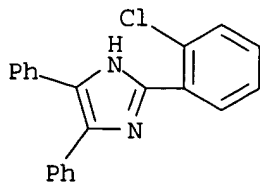
RN 6143-80-2 CAPLUS

CN 1H-Imidazole, 2-(2-chlorophenyl)-4,5-diphenyl-, dimer (9CI) (CA INDEX NAME)

CM 1

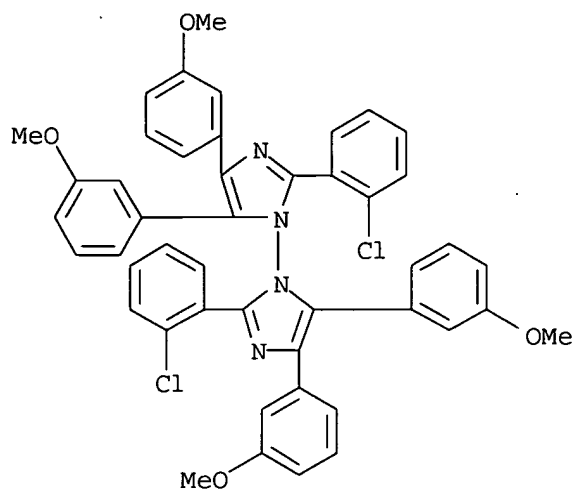
CRN 1707-67-1

CMF C21 H15 Cl N2



RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 23 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

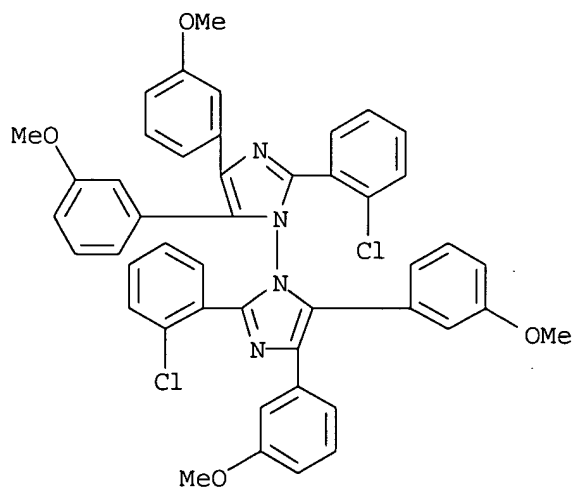
IT **29777-36-4**

RL: USES (Uses)

(photopolymerizable compns. containing aromatic nitro compound  
**photoinitiator** and, for photoimaging)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 24 OF 24 CAPLUS COPYRIGHT 2005 ACS on STN

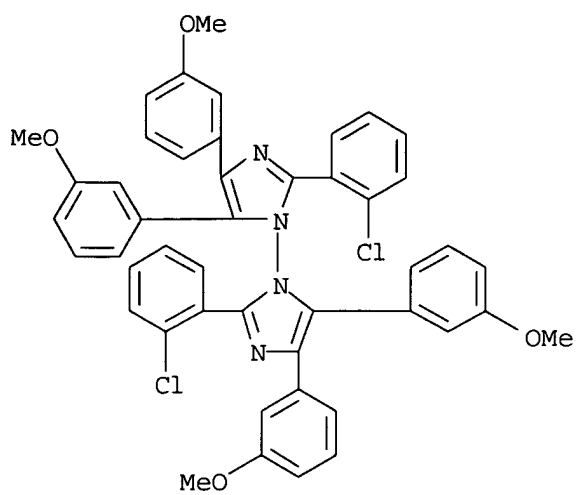
IT **29777-36-4**

RL: USES (Uses)

(lithog. plate photopolymerizable composition containing **photoinitiator**  
combination containing)

RN 29777-36-4 CAPLUS

CN 1,1'-Bi-1H-imidazole, 2,2'-bis(2-chlorophenyl)-4,4',5,5'-tetrakis(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



=>

Connection closed by remote host  
hisd

```
> s 17
L8          262 L7

=> s photoinitiator
L9          8719 PHOTOINITIATOR

=> s 18 and 19
L10         24 L8 AND L9

=> s polymeric photoinitiator
          193429 POLYMERIC
          8719 PHOTOINITIATOR
L11         24 POLYMERIC PHOTOINITIATOR
          (POLYMERIC(W) PHOTOINITIATOR)

=> s 111 and 18
L12         0 L11 AND L8
```